

## Chapter 2: Changes to the Draft EIS

This section provides the changes by section to the Draft EIS. The changes are identified with underline indicating new text and strikeout for those portions of the Draft EIS that have been revised in response to comments received from the public and state and federal regulatory agencies.

### 2.1 Executive Summary

#### **Changes to Section ES.6, Required Federal Actions (Draft EIS page ES.2)**

Below is a listing of federal actions that are required for implementation of the build alternatives.

- Section 106 Agreement/Concurrences (Federal Highway Administration consultation with Utah State Historic Preservation Office)
- Section 309 Review (U.S. Environmental Protection Agency)
- ~~Advisory Council on Historic Preservation Memorandum of Agreement~~

### 2.2 Chapter 1 – Purpose and Need for Action

#### **Changes to Section 1.2.2, Capacity/Transportation Demand (Draft EIS page 1.5, footnote 1).**

<sup>1</sup> The modeling results presented are consistent with the latest WFRC model version (released Version 5.0 ~~4.2~~ and Beta Version ~~4.3~~, July-December 2006~~5~~) (InterPlan 2006 –See Attachment A – Riverdale Road Model Comparison). ~~Riverdale Shopping Center Expansion Traffic Impact Study, dated August 5, 2005, validates the traffic data for this project. At the intersection location at 300 West, a LOS D was determined which is the same LOS at this same location in Tables 1.4 and 1.8.~~

## 2.3 Chapter 2 – Alternatives

### Changes to Section 2.2.2.2, TSM/TDM Alternative (Draft EIS page 2.3)

- **Signal Modification:** The signals along Riverdale Road would be upgraded to accommodate the new turn lanes. A new signal ~~would be constructed at 500 West when traffic numbers met new signal warrants~~is anticipated to be constructed by Riverdale City at 550 West in 2006 for a proposed new development. This project is independent of the Riverdale Road project but has been included in the alternative evaluation.

### Changes to Section 2.2.3.1, Lane Addition Alternative (Draft EIS page 2.5)

- **Signal Modification:** The signals along Riverdale Road would be upgraded to accommodate the new turn lanes. A new signal ~~would be constructed at 500 West when traffic numbers met new signal warrants~~is anticipated to be constructed by Riverdale City at 550 West in 2006 for a proposed new development. This project is independent of the Riverdale Road project but has been included in the alternative evaluation.

### Changes to Section 2.4.2.2.1, Lane Addition Alternative (Draft EIS page 2.12)

The user benefit cost savings of implementing a SPUI are estimated at \$3.0 million over the next 20 years. The difference between the structure cost of \$1.3 million and the user benefit is \$1.7 million. Although the SPUI does provide better overall performance, a tight diamond would also meet the project purpose and requires a similar amount of land as a SPUI. Therefore, UDOT would make a final decision on the exact interchange type during final design based on available funds. For this analysis conducted in this EIS, a SPUI was considered. ~~In addition, to better operational performance with no additional impacts, the SPUI is the preferred interchange type and has been included as part of the Lane Addition Alternative.~~ Details of the operational analysis have been documented in the Riverdale Road Traffic Analysis Report.

### Changes to Section 2.4.2.2.1, Lane Addition Alternative (Draft EIS page 2.12)

- **Signal Modification:** The signals along Riverdale Road would be upgraded to accommodate the new turn lanes. A new signal ~~would be constructed at 500 West when traffic numbers met new signal warrants~~ is anticipated to be constructed by Riverdale City at 550 West in 2006 for a proposed new development. This project is independent of the Riverdale Road project but has been included in the alternative evaluation.

## 2.4 Chapter 3 – Affected Environment

*No changes were made.*

## 2.5 Chapter 4 – Environmental Consequences

### Changes to Section 4.9, Water Quality Impacts (Draft EIS pages 4.11–4.13)

Road improvements can potentially affect surface waters due to permanent changes in ground surface conditions. Long-term impacts to surface water include the potential increase of surface runoff due to additional impervious surface areas. Also, the increased road surface would require the application of additional salt for roadway de-icing activities during winter storms. This would increase the total dissolved solids (TDS) concentrations in the surface runoff.

For this study, heavy metals (copper, lead, zinc), total suspended solids (TSS), and TDS were evaluated for impacts to surface waters. These constituents were chosen in agreement with and recommended by UDWQ. As shown in Table 3.15–State Standards and Background Concentrations, the Weber River background concentrations are below the Utah standards for copper, lead, zinc, TSS, and TDS. Background concentrations of TSS were 21 mg/L (the Utah state standard is 25 mg/L) and background concentrations of TDS were 291 mg/L (the Utah state standard is 1,200 mg/L).

Parts of Riverdale Road would be expanded by one lane in each direction, which could increase the pollutant discharge into the Weber River. However, most of the area that would be replaced with the new roadway lanes is already developed as parking lots or other types of impervious surfaces. Therefore, it is expected that the amount of increased pollutants would be very small.

In addition, there are few water quality mitigation measures such as detention basins currently in the project area to handle runoff from the urban area. To

improve water quality from urban runoff including that from Riverdale Road, storm water detention basins are planned for the I-84 interchange as part of the Riverdale Road project and at 4400 South as part of an overall storm water upgrade proposed by Riverdale City. These detention basins would help reduce the amount of pollutant discharge into the Weber River. As noted above, the Weber River background concentrations are below state standards. Because the storm water system along Riverdale Road would be improved, it is not expected that the beneficial use of the river or the standards would be impacted by the project.

The Draft EIS noted that Riverdale City planned to add detention basins at Pacific Avenue. However, as part of its comments on the Draft EIS, the City stated that it does not currently have plans to put in the Pacific Avenue detention basins. Although UDOT does not expect that the Riverdale Road project would impact the Weber River, UDOT is committed to ensuring that applicable state water quality discharge requirements are met. As part of final design, UDOT will conduct a detailed storm water evaluation and implement all necessary controls to mitigate any water quality impacts. A report detailing the results of this evaluation will be provided to FHWA for approval.

It is estimated that the pollutant concentrations in the surface water runoff are similar to the mean concentrations observed during storm events for Salt Lake County. These pollutant concentrations are shown in Table 4.5. The listed concentrations are consistent with median concentrations listed in FHWA Publication PD-96-032 for urban and rural concentrations in urban highway runoff. Since many of the methods used for estimating pollutant loading have not changed in the last 20 years, it was assumed that the pollutant concentrations listed in Table 4.5 will be applicable for the design year.

**Table 4.5 Pollutants of Concern in Surface Water Runoff.**

Pollutant	Expected Mean Concentration (mg/L)
Total Copper	0.039
Total Lead	0.031
Total Zinc	0.181
TSS	116
TDS	800

mg/L = milligrams per liter

UDWQ conducts in-stream monitoring on the Weber River. Based on the monitoring results between 1995 and 2005, the mean level of TSS and TDS were 21 mg/L and 291 mg/L, respectively. The mean concentrations for copper, lead, and zinc were all below the analytical detection limit. UDWQ verified that the water quality in the Weber River is quite good by state standards and that there are no notable threats to water quality at this time. However, TSS concentrations are high at times.

## 4.9.1 Direct Impacts

### 4.9.1.1 No-Action Alternative

Existing storm water would continue to be discharged into the Weber River and Burch Creek through the existing systems.

### 4.9.1.2 Lane Addition Alternatives

Proposed improvements include replacing or using the existing storm drain systems. These systems would continue to discharge into the Weber River and Burch Creek. With the added paved area, there would be more potential to intercept storm water runoff.

The proposed drainage infrastructure features six subsystems (shown in Figure 4.4) and would outfall to a new detention basin, a new proposed city storm sewer, or an existing trunk line of another storm sewer. These subsystems along Riverdale Road are as follows:

- I-15 to 1900 West
- I-15 to Weber River
- Weber River to Burch Creek
- Lincoln Avenue to Burch Creek
- Lincoln Avenue to 36<sup>th</sup> Street
- 36<sup>th</sup> Street to Washington Boulevard

The I-15 to 1900 West subsystem is located within the Roy city limits and drains to the west. A proposed 24-inch trunk line, constructed as part of this project, would connect to an existing storm drain at 1900 West and drain to a series of existing detention basins within the city. The storm sewer subsystem along Riverdale Road will be updated as needed to match the proposed roadway but would outfall to the existing storm drain system.

The I-15 to Weber River subsystem is located entirely within the Riverdale city limits and would drain to the east. The proposed detention basins within the I-84 interchange infield area would control the size of the trunk line (a 36-inch line)

and restrict the outflow to the proposed Riverdale city storm drain system at 4400 South. The I-84 detention pond would be constructed as part of this project. Riverdale City would construct the 4400 South detention pond and storm water laterals as an independent project.

The Weber River to Burch Creek subsystem also lies within Riverdale. Runoff would be conveyed to the north through a new outfall pipe along 300 West and Pacific Avenue to Burch Creek. ~~A detention basin would be constructed along the west side of Pacific Avenue. This basin, which is about 12.3 acre feet in size, would restrict the outflow to Burch Creek. The 300 West outfall and Pacific Avenue detention pond would be constructed by Riverdale City as an independent project.~~

The Lincoln Avenue to Burch Creek subsystem would connect to the 300 West outfall. The storm sewer trunkline in Riverdale Road would be constructed as part of this project. All runoff within this area would drain the 300 West outfall and into ~~the proposed detention basin at Pacific Avenue~~ Burch Creek.

The Lincoln Avenue to 36<sup>th</sup> Street and the 36<sup>th</sup> Street to Washington Boulevard subsystems drain to a trunk line of an Ogden storm sewer system. The storm sewer subsystem along Riverdale Road would be improved as part of this project and updated as needed to match the proposed roadway but would outfall to the existing storm drain system.

The difference between the existing and proposed 10-year storm event runoff in cubic feet per second (cfs) is shown in Table 4.6 for the six subsystems. Due to the extent of existing development and the small increase in impervious area, there is only a 0.9% increase of discharge into the Weber River for the 10-year event resulting from the Lane Addition Alternative.

**Table 4.6—Proposed 10-Year Storm Event Runoff.**

Road Segment	Existing 10-Year Runoff (cfs)	Proposed 10-Year Runoff (cfs)	Difference (cfs)
I-15 to 1900 West	7.4	7.4	0.0
I-15 to Weber River	62.3	64.0	1.7
Weber River to Burch Creek	115.0	115.6	0.6
Lincoln Avenue to Burch Creek	86.1	86.4	0.3
Lincoln Avenue to 36 <sup>th</sup> Street	18.0	18.0	0.0
36 <sup>th</sup> Street to Washington Boulevard	7.6	7.6	0.0

cfs = cubic feet per second

The improvements to the I-15 to 1900 West and 36<sup>th</sup> Street to Washington Boulevard subsystems would not have an impact on water quality because there is little change between the existing and proposed roadway runoff as shown in Table 4.6. There is a 0.03% increase in flow for the proposed Lincoln Avenue to 36<sup>th</sup> Street subsystem that would discharge to Ogden. This flow is considered insignificant and has been excluded from this analysis. Although these storm sewers are subject to the UDWQ storm water discharge requirements, the relative contribution from Riverdale Road is 2.6 cfs (1%) above the existing 10-year runoff and is considered minor.

Riverdale City will design their new storm sewer system to meet UDWQ storm water discharge requirements that includes the additional minor flow from this alternative. The City would accomplish this by constructing a detention/retention system at 4400 South and Pacific Avenue. ~~Because the City is responsible for meeting UDWQ storm water discharge requirements, neither a water quantity nor water quality analysis is required for this project.~~ As stated under Section 4.9–Water Quality Impacts, it is not expected that the proposed Riverdale Road improvements would impact the water quality of the Weber River.

No drinking water sources for any of the communities would be affected by the proposed action. All water wells and water right points-of-diversion are located outside the proposed improvement footprint; therefore, there would not be any direct impacts to them.

## **4.9.2 Indirect Impacts**

### **4.9.2.1 No-Action Alternative**

There would be no indirect impacts to water quality resulting from the No-Action Alternative.

### **4.9.2.2 Lane Addition Alternatives**

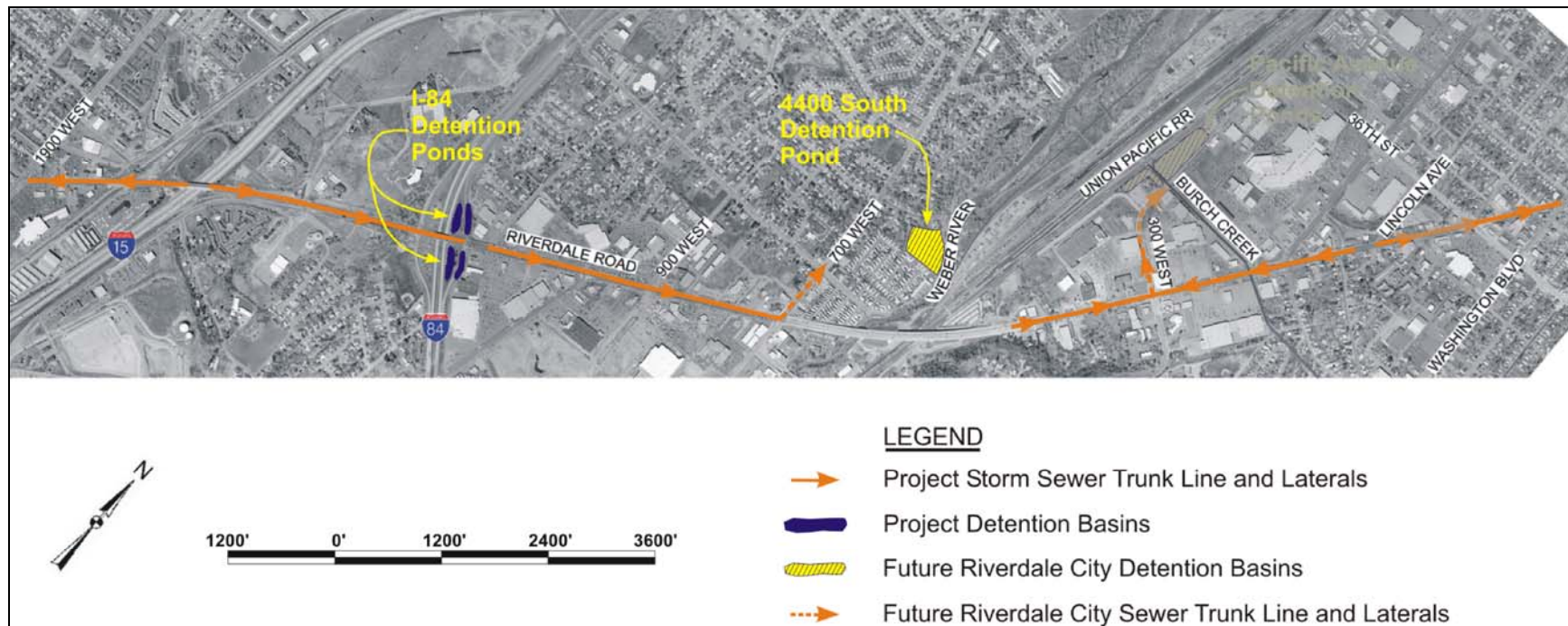
The local communities are currently working together to implement best management practices (BMPs) to address UDWQ requirements and share the cost of appropriate mitigation for water quality with UDOT. The detention ponds at 4400 South and Pacific Avenue are outside the proposed project and would improve the water quality of the two waterways.

No other indirect impacts to water quality would be created by the proposed project.

### 4.9.3 Mitigation

To minimize impacts to water quality, detention basins will be constructed as part of the Riverdale Road project or by Riverdale City to improve their storm water system to meet UDWQ discharge requirements. As part of the Riverdale Road project, detention basins will be constructed at the infield in the I-84 interchange. Riverdale City will construct detention basins at 4400 South ~~and Pacific Avenue~~. The Draft EIS noted that Riverdale City planned to add detention basins at Pacific Avenue. However, as part of its comments on the Draft EIS, the City stated that it does not currently have plans to put in the Pacific Avenue detention basins. Although it is not expected that the Riverdale Road project would impact the Weber River, UDOT is committed to ensuring that applicable state water quality discharge requirements are met. As part of final design, UDOT will conduct a detailed storm water evaluation and implement all necessary controls to mitigate any water quality impacts. A report detailing the results of this evaluation will be provided to FHWA for approval. With the implementation of these storm water improvements the above measures, it is not anticipated that water quality standards would be exceeded.





**Figure 4.4—Proposed Drainage System Improvements.**

## Changes to Section 4.26, Summary of Impacts and Mitigation Measures (Draft EIS page 4.23)

**Table 4.11–Summary of Mitigation Measures.**

Environmental Component	Mitigation Measures
Land Use	Acquire right-of-way in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.
Right-of-Way	Acquire property and relocate businesses in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.
Economic Resources	Evaluate proximity damages and remaining property value when acquiring property.
Water Quality	<ul style="list-style-type: none"> <li>• Monitor the nine water right points-of-diversion before, during, and after construction. Note any changes to the water quality and quantity and investigate to determine the cause of the change. Once the cause is determined, take appropriate corrective action or compensate the owner in accordance with Utah Department of Transportation (UDOT) policies.</li> <li>• Construct storm water detention basins at the I-84 interchange.</li> <li>• <u>As part of final design, UDOT will conduct a detailed storm water evaluation and implement all necessary controls to mitigate any water quality impacts. A report detailing the results of this evaluation will be provided to FHWA for approval.</u></li> <li>• Obtain a Utah Division of Water Quality construction permit.</li> </ul>
Vegetation and Wildlife	Landscaped and natural vegetation disturbed during construction and not paved as part of the project will be restored by providing topsoil and appropriate seeding and mulching.
Archaeological Properties	Inventory any archaeological properties discovered during construction.
Paleontological Resources	Any paleontological resources identified during construction will be evaluated, and a treatment plan will be implemented in consultation with the Utah Geological Survey and identified interested parties. A Memorandum of Agreement stipulating the mitigation measures will be developed and agreed upon by FHWA, UDOT, and the Utah State Historic Preservation Office.
Recreational Sites	No mitigation is proposed. Wall to be constructed at Golden Spike Park as an avoidance alternative.
Hazardous Waste	<p>Implement worker protection program in accordance with Occupational Safety and Health Administration regulations (29 Code of Federal Regulations 1926.20 and 1926.62(e)) and specify adequate work practices, engineering controls, and respiratory protection for the demolition of the I-15 bridge. Notify Utah Department of Environmental Quality if hazardous materials are encountered during the construction. Excavate, dispose of, and limit the spread of contamination in a manner consistent with the Utah remediation standards.</p> <p>Contact the Utah Division of Environmental Response and Remediation if monitoring wells installed under the Leaking Underground Storage Tank program are encountered.</p>

Environmental Component	Mitigation Measures
Construction	<p><b>Phasing:</b> Obtain additional funding, if possible, to allow the entire project to be constructed at one time. If additional funding cannot be obtained, phase the project to avoid having construction occur in an area more than once.</p> <p><b>Erosion and Siltation:</b> Obtain a Utah Pollutant Discharge Elimination System General Stormwater Discharge Permit. Develop and implement a Storm Water Pollution Prevention Plan.</p> <p><b>Noise:</b> Enforce local noise ordinances. Implement noise abatement measures contained in UDOT's current Standard Specifications for Road and Bridge Construction.</p> <p><b>Dust:</b> Implement and monitor best management practices contained in UDOT's current Standard Specifications for Road and Bridge Construction. Obtain construction permits from the Utah Division of Air Quality. Develop, obtain approval for, and implement a dust-control plan.</p> <p><b>Invasive Species:</b> Implement and monitor UDOT's current Standard Specifications for Road and Bridge Construction.</p> <p><b>Inconvenience to Motorists:</b> Keep two lanes of traffic in each direction open between 6:00 AM and 9:00 PM Monday through Saturday including state and federal holidays and every day between Thanksgiving Day and New Year's Day. Complete the majority of the work between 9:00 PM and 6:00 AM. Have an active public involvement program to inform motorists of construction activities. Complete construction in segments to limit the time that each segment of the roadway is under construction.</p> <p><b>Unightly Appearance:</b> Implement an appropriate seeding vegetation and/or landscaping plan. Maintain and keep storage areas for equipment, materials, and other accessories in a reasonable condition of cleanliness and orderly placement. Remove unused or unnecessary traffic-control equipment promptly.</p> <p><b>Utility Disruptions:</b> Coordinate with the utility companies to plan work activities so that utility disruptions to a business occur when the business is closed or during off-peak times. Contact Blue Stakes to identify the location of all utilities before beginning work. Use care when excavating to avoid unplanned utility disruptions. Restore service as quickly as possible if utilities are unintentionally disrupted.</p> <p><b>Safety:</b> Develop and implement a safety program for the project.</p> <p><b>Economics:</b> Provide a weekly newsletter to all businesses along Riverdale Road describing the progress of the construction and upcoming construction events. Provide a full-time person, available 24 hours a day, 7 days a week, to monitor the concerns of businesses and work with construction crews to prevent problems when possible and mitigate issues as they arise. Provide business signs along the roadway that identify businesses within the construction limits. Hold a monthly meeting with business owners to inform them of upcoming construction activities and to provide a forum for the businesses to express their concerns with the project. Perform no work between Thanksgiving Day and New Year's Day or on state or federal holidays. Perform the majority of the work between 9:00 PM and 6:00 AM in commercial areas. Complete construction in segments to limit the time each segment of the roadway is under construction. Provide a financial incentive/disincentive clause to encourage the Contractor to minimize the time it takes to construct the project and the impact to local businesses.</p>

## 2.6 Chapter 5 – Section 4(f) Evaluation

*See Chapter 3, Section 4(f) Evaluation, of this Final EIS for the final Section 4(f) determination for the Riverdale Road project.*

## 2.7 Chapter 6 – List of Preparers

**Add the following:**

**HDR Engineering Inc., Salt Lake City, Utah**

Vincent Izzo, Project Manager, B.A., Geography, 21 years experience

Jeffrey Simmons, P.E., Project Engineer, B.S., Civil Engineering, 17 years experience

Carrie Ulrich, Technical Editor, B.S., Environmental Studies, 14 years experience

Lindsay Thacker, Public Involvement, B.S., English Technical Communication, 3 years experience

## 2.8 Chapter 7 – Distribution List

*No changes were made.*

## 2.9 Chapter 8 – Comments and Coordination

### **Changes to Section 8.1.1, Public Meetings (Draft EIS page 8.1)**

**July 27, 2006**

The Draft EIS public hearing (open-house style) was held on July 27, 2006, from 4:00 PM to 7:00 PM. The meeting was held in the Riverdale Community Center building. The purpose of the meeting was to obtain comments on the Riverdale Road Draft EIS that was released for public review on July 14, 2006. Project staff were available to respond to public concerns, and 28 display boards provided detailed information about the project. A court reporter attended the meeting to take verbal comments, and comment forms were available for written comments. The public hearing was advertised in *The Salt Lake Tribune*, the *Deseret Morning News*, and *The Spectrum* newspapers. Individual notifications were sent to the 300 people on the project mailing list. About 49 people attended the meeting.

## **2.10 Appendix A – Determination of Eligibility and Finding of Effect**

*No changes were made.*

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